

WE CLAIM

1. A method of implementing a compressed mode of operation in a mobile communication network in which data transmission and reception in user equipment is ceased so
5 a required measurement can be made, **characterized in that**

the power level of data transmission in the user equipment is adjusted to a correct power level before a subsequent data transmission is sent.

10 2. A method according to claim 1, **characterized in that**

the compressed mode is implemented using a single frame method.

15 3. A method according to claim 2, **characterized in that**

compressed mode data transmission is sent in beginning slots of the single frame, the data transmission and reception is ceased in intermediate
20 slots of the single frame and one or more measurements are made during the transmission gap, and the control channels and power control commands are only sent in the remaining slots of the single frame to adjust the power level of the data transmission in the next frame to the
25 correct level.

4. A method according to claim 1, **characterized in that**

the compressed mode is implemented using a double frame method, and control channels and power control
5 commands are sent in slots of a second frame.

5. A method according to claim 4, **characterized in that**

compressed mode data transmission is sent in the
10 beginning slots of a first frame, the data transmission and reception is ceased in the remaining slots of the first frame and measurements are made during the transmission gap, the control channels and power control commands are only sent in the beginning slots of the
15 second frame to adjust the power level of the data transmission in the second frame to the correct level, and the subsequent data transmission is sent in the remaining slots of the second frame.

20 6. A method according to claim 1, **characterized in that** the method is implemented during a handover procedure.

7. A method according to claim 6, **characterized in that**
25 **that** the handover procedure is a hard handover.

8. A method according to claim 6, **characterized in**
that the handover procedure is an intersystem handover
between two wideband code division multiple access
networks, a handover between frequency division duplex
5 and time division duplex modes, or a handover between a
wideband code division multiple access network and
another network such as a GSM network.

9. A method according to claim 1, **characterized in**
10 **that** the measurement is an inter-frequency measurement.

10. A method according to claim 9, **characterized in**
that

the measurement includes power level measurements,
15 an initial synchronization measurements to a frequency
correction channel and a synchronization channel, and
tracking measurements of the frequency correction and
synchronization channels and base station identity code
decoding.

11. User equipment for a mobile communication network having a compressed mode module for implementing a compressed mode of operation in which data transmission and reception is ceased so a required measurement can be
5 made, **characterized in that**

the user equipment includes an adjust power level module for adjusting the power level of data transmission to a correct power level before a subsequent data transmission is sent.

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12. User equipment according to claim 11,
characterized in that

the compressed mode module implements the compressed mode using a single frame method.

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13. User equipment according to claim 12,
characterized in that

the user equipment has a handover module with the compressed mode module, a measurement module and an
20 adjust power level module;

the compressed mode module sends compressed mode data transmission in the beginning slots of the single frame and ceases the data transmission and reception in the intermediate slots of the single frame;

25 the measurement module makes one or more measurements during the transmission gap; and

the adjust power level module only sends the control

channels and power control commands are only sent in the remaining slots of the single frame to adjust the power level of the subsequent data transmission in the next frame.

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14. User equipment according to claim 11,
characterized in that

the compressed mode module implements the compressed mode using a double frame method, and control channels
10 and power control commands are sent in slots of a second frame.

15. User equipment according to claim 14,
characterized in that

15 the user equipment has a handover module with the compressed mode module, a measurement module and an adjust power level module;

the compressed mode module sends compressed mode data transmission in the beginning slots of a first
20 frame and ceases the data transmission and reception in the remaining slots of the first frame;

the measurement module makes measurements during the transmission gap;

the adjust power level module only sends the control
25 channels and power control commands in the beginning slots of the second frame to adjust the power level of the data transmission in the second frame to the correct

level; and

the compressed mode module sends the subsequent data transmission in the remaining slots of the second frame.

5 16. User equipment according to claim 11,
characterized in that the user equipment has a handover procedure module having the compressed module therein for implementing the compressed mode during a handover procedure.

10 17. User equipment according to claim 16,
characterized in that the handover procedure is a hard handover.

15 18. User equipment according to claim 16,
characterized in that the handover procedure is an intersystem handover between two wideband code division multiple access networks, a handover between frequency division duplex and time division duplex modes, or a
20 handover between a wideband code division multiple access network and another network such as a GSM network.

19. User equipment according to claim 16,
characterized in that the handover procedure module has a
25 measurement module for making an inter-frequency measurement.

20. User equipment according to claim 19,
characterized in that the measurement module makes power
level measurements, initial synchronization measurements
to a frequency correction channel and a synchronization
5 channel, and tracking measurements of the frequency
correction and synchronization channels and base station
identity code decoding.

21. A method according to claim 1, **characterized in**
10 **that**

compressed mode data transmission is sent in the
beginning slots of a first frame, the data transmission
and reception is ceased in the remaining slots of the
first frame and beginning slots of a second frame and
15 measurements are made during this transmission gap, the
control channels and power control commands are only sent
in intermediate slots of the second frame to adjust the
power level of the data transmission in the second frame
to the correct level, and the subsequent data
20 transmission is sent in the remaining slots of the second
frame.

22. User equipment according to claim 11,
characterized in that

the user equipment has a handover module with the
compressed mode module, a measurement module and an
5 adjust power level module;

the compressed mode module sends compressed mode
data transmission in the beginning slots of a first frame
and ceases the data transmission and reception in the
remaining slots of the first frame and beginning slots of
10 a second frame;

the measurement module makes measurements during
this transmission gap;

the adjust power level module sends only the control
channels and power control commands in intermediate slots
15 of the second frame to adjust the power level of the data
transmission in the second frame to the correct level;
and

the compressed mode module sends the subsequent data
transmission in the remaining slots of the second frame.
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23. A method according to claim 1, **characterized in
that**

the compressed mode is implemented using a multiple
frame method, and control channels and power control
25 commands are sent in slots of a last frame.

24. User equipment according to claim 11,
characterized in that

the compressed mode module implements the compressed
mode using a multiple frame method, and sends control
5 channels and power control commands in slots of a last
frame.

25. A method according to claim 2, **characterized in
that**

10 compressed mode data transmission is sent in
beginning slots of the single frame, the data
transmission and reception is ceased in intermediate
slots of the single frame and one or more measurements
are made during the transmission gap, the control
15 channels and power control commands are sent in the
subsequent intermediate slots of the single frame to
adjust the power level of the data transmission to the
correct level and subsequent data transmission is sent in
the remaining slots of the single frame.

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26. A method according to claim 4, **characterized in that**

compressed mode data transmission is sent in the beginning slots of a first frame, the data transmission
5 and reception is ceased in the intermediate slots of the first frame and measurements are made during the transmission gap, the control channels and power control commands are sent in slots that overlap the first and second frames to adjust the power level of the data
10 transmission in the second frame to the correct level, and the subsequent data transmission is sent in the remaining slots of the second frame.

27. A method according to claim 4, **characterized in that**

compressed mode data transmission is sent in a first frame, the data transmission and reception is ceased in the beginning slots of the first frame and one or more measurements are made during the transmission gap, and
20 the control channels and power control commands are sent in remaining slots of the second frame to adjust the power level of the data transmission in the second frame to the correct level.

28. A method according to claim 2, **characterized in that**

power control commands are sent in slots of the single frame.

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29. A method according to claim 28, **characterized in that**

control channel commands are also sent in slots of the single frame.

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30. User equipment according to claim 12, **characterized in that**

the compressed mode module sends power control commands in slots of the single frame.

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31. User equipment according to claim 30, **characterized in that**

the compressed mode module also sends control channel commands in slots of the single frame.

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32. A method according to claim 1, **characterized in that** the compressed more is implemented with a method using three or more frames.

33. A method according to claim 32, **characterized in that**

compressed data transmission is sent during a first frame and beginning slots of a second frame,
5 transmission/reception cessation and measurements is performed in the remaining slots of the second frame and beginning slots of a third frame, and power level adjustment are performed in the remaining slots of the third frame.